

REMARKS

This application has been reviewed in light of the Office Action dated February 10, 2004. Claims 1-3, 5-9, 13-15, 17-19, 21, 23, 24, 28-31, 34, 35, 39-42, 45, 46, and 48-50 are pending in this application. Claims 1, 13, 23, 28, 34, 39, 45, and 48 are in independent form. Favorable reconsideration is requested.

First, Applicants gratefully acknowledge the allowance of Claims 1-3, 5-9, 13-15, 17-19, 21, 23, 24, 28-31, 45, 46, and 48-50.

The Office Action rejected Claims 34, 35, and 39-42 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,270,187 (Murcia et al.) in view of U.S. Patent No. 5,581,284 (Hermanson). Applicants respectfully traverse this rejection.

Applicants submit that independent Claims 34 and 39, together with the remaining claims dependent thereon, are patentably distinct from the proposed combination of the cited prior art at least for the following reasons.

The aspect of the present invention set forth in Claim 34 is a recording apparatus for forming a color image on a recording material using a recording head having a plurality of recording elements. The apparatus includes a recording head driving means for driving the recording elements of the recording head in accordance with image data to form an image on the recording material, and a supplementing means for effecting supplementation recording with a recording element for black color recording, for a recording position corresponding to a non-operating recording element among the recording elements for non-black color recording.

Among other important features of Claim 34 is that the unprintable non-black area is supplementally printed by a black recording element.

Murcia, as understood by Applicants, relates to a method and apparatus for hiding

errors in single-pass incremental printing. The Office Action states that Murcia et al. teaches “the instant claimed printing apparatus and method of correcting (characterized by correction module 76) and compensating nozzles failure except for printing the black ink in substitution for the non-operative nozzles corresponding to [the] non-black color recording ink.” Applicants note that Murcia et al. discusses that a) the defective black recording element is supplemented by the process black which is provided by synthesis of non-black colors, and b) that the defective printing head is supplemented by a print head for a color having the same color as the defective printing head.

Hermanson relates to a method of extending the life of a printbar of a color ink jet printer. The Office Action states that Hermanson teaches “detecting the problem nozzle and compensating the missing dot corresponding to the problem nozzle with ink of [a] different color. For example, black ink can be filled in for missing cyan or magenta droplets” (citing col. 5, lines 18-23). Applicants note that Hermanson discusses that black areas can be supplemented by mixture of non-black color inks. Applicants submit, however, that nothing has been found in Hermanson, or in Murcia et al., that would teach or suggest that an unprintable non-black area is supplementally printed by a black recording element, as recited in Claim 34.

Applicants submit that at least for this reason, Claim 34 is patentable over the cited prior art, when take separately or in any proposed combination.

Claim 39 is a method claim corresponding to apparatus Claim 34, and is therefore allowable for at least the same reasons as discussed above in connection with Claim 34.

The other rejected claims in this application depend from Claims 34 or 39 discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing remarks, Applicants respectfully request favorable reconsideration and the allowance of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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